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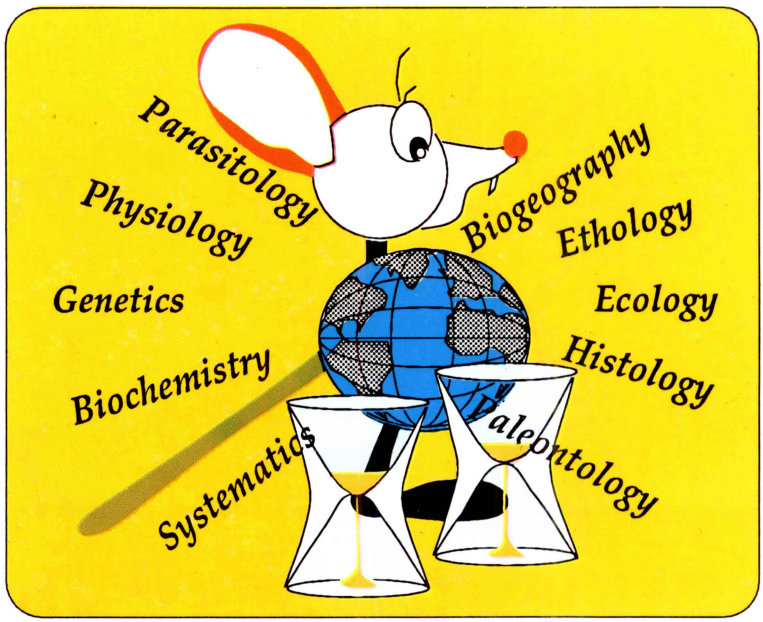
Fifth International Conference

Rodens & Spatium

Biodiversity and Adaptation

Institut Agronomique et Vétérinaire Hassan II, Rabat, Maroc

Edited by A. ZAIME



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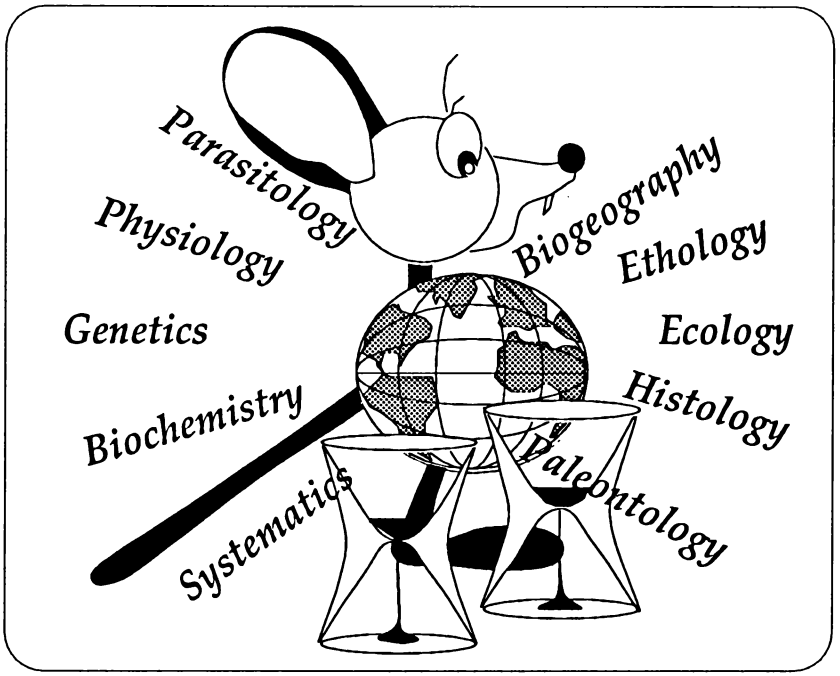

* Département de Physiologie Animale, I.A.V. Hassan II, B.P. 6445 Instituts, 10101 Rabat, Maroc

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Institut Agronomique et Vétérinaire Hassan II
B.P. 6202-Instituts, 1 0 101 RABAT (Maroc)
Télex AGROVET 368 78 M
Fax (07) 77 81 35 ou 77 81 77
Tél. (07) 77 43 51

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DIFFERENCES IN THE ECOLOGICAL AND CRANIOMETRIC PARAMETERS OF *CLETHRIONOMYS GLAREOLUS* INDIVIDUALS INHABITING FOREST BIOTOPES AND ECOTONE

Anna BANACH[1], Alexey VASILYEV[2] & Irina VASILYEVA[2]

[1]Dep. Ecol., Zool.Inst., Warsaw Univ., Warszawa, Krakowskie, Poland.
[2]Inst.Plant & Animal Ecol., Ural Division, RAS, Ekaterinburg, Russia.

The aim of this study was to compare body weight, sexual activity, activity of movements and skull measurements of bank voles (Clethrionomys glareolus) individuals from the alderwood (AW), pine forest (PF) and ecotone (E) between them. Spatial distribution and individual characteristics of bank vole were analysed in a four weeks capture-recapture experiment in summer 1987. A 3 ha trapping plot covered the biotopes and the ecotone in Mazurian Lakeland (N-E Poland). Classification of bank voles as a function of their center of activity showed that individuals from AW, PF and E differed in sex-ratio, body weight, percent of sexually active individuals, their distance of movements and trappability. Individuals from ecotone were bigger, more sexually active and more active in movements than those from the biotopes (AW, PF). Bank voles inhabiting AW were less sexually active, less active in movements and had lower body weight than individuals from E and PF. A total of 159 cleaned and aged skulls from AW, PF and E were studied for 10 linear measurements. The data were analysed using both univariate and multivariate statistics. A set of log-transformated skull variables was processed by discriminant function analysis. Among subadults there were no significant differences between sexes. Animals from AW and PF differed significantly and animals from E were in intermediate position between them. Among adults two first discriminant functions were found to be significant. The first reflected the differences between sexes. The second one was connected with differences between biotopes. However, in this case the animals from E demonstrated some peculiarities in their skull size and shape as compared with those of AW and PF in the direction of more skull maturity. Comparison of all analysed individual characteristics and craniometric parameters permits us to suggest that individuals from AW and PF can be considered as different subpopulations. Ecological status of individuals living in ecotone will be discussed.